## Persistent Grade 5 Reflux into a Transplanted Kidney in a Spinal Patient Despite Sphincterotomy

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Keywords: reflux; spinal injury; sphincterotomy; transplantation; videourodynamics.

A 3 year-old spinal injury patient was found to have asymptomatic hydronephrosis of his transplant during annual surveillance (Figure 1). Prior to presentation, he had developed urinary tract infection and serum creatinine was measured at 159µmol/l. His past history was remarkable for type 1 diabetes since the age of 5, spinal artery thrombosis aged 19 culminating in a C6 incomplete tetraplegia and diabetic nephropathy for which he received a live donor transplant at the age of 37. Bladder management involved convene drainage and he had undergone two previous sphincterotomies. Videourodynamics revealed a stable bladder during filling but high pressure sustained contractions during voiding resulting in grade V reflux into the transplanted kidney (Figures 2a & b). The bladder emptied completely with no evidence of dyssynergia. The patient was counselled regarding his treatment options and was listed for repeat videourodynamics in 6 months.

There is limited data on renal transplant outcome in spinal injury patients. It is acknowledged that transplant reduces urolithiasis and has similar outcomes to non-spinal patients.<sup>(1)</sup> Endoscopic management is recognised as first line treatment for transplant related reflux.<sup>(2)</sup> Where concomitant graft reflux and acute retention occur due to prostatic hyperplasia hybrid techniques involving holmium enucleation and simultaneous nephrostomy have been described.<sup>(3)</sup>



Figure 1. Ultrasound revealing Hydronephrosis of the transplanted kidney.



**Figure 2. a:** Videourodynamic trace demonstrating reflux into the transplanted kidney with clubbing of the calyces; **b:** Videourodynamic trace demonstrating grade 5 reflux into the transplanted kidney and neoureter with clubbing of the calyces.

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Received January 2016 & Accepted December 2016

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## REFERENCES

- 1. Basiri A, Shakhssalim N, Hosseini-Moghddam SM, Parvaneh MJ, Azadvari M. Renal transplant in patients with spinal cord injuries. Exp Clin Transplant. 2009; 7 :28-32.
- 2. Akiki A, Boissier R, Delaporte V, Maurin C, Gaillet S, Karsenty G. et al. Endoscopic treatment of symptomatic vesicoureteral reflux after renal transplantation. J Urol. 2015; 193: 225-9.
- 3. Nohara T, Matsuyama S, Shima T, Kawaguchi S, Seto C. Holmium Laser Enucleation of the Prostate With Percutaneous Nephrostomy Into the Transplanted Kidney in Patient With Severe Benign Prostatic Hyperplasia With Vesicoureteral Reflux A Case Report. Urol Case Rep. 2015; 4: 33-5.